Claim 19 (New): A pull apart device according to claim 16, distributed in the form of a laminated card manufactured in a single or multiple operation with or without the need for subsequent affixing to another delivery vehicle.

Claim 20 (New): A pull apart device according to claim 18, wherein the polystyrene surface is over-laminated with a polymeric, paper or composite stock including metalized films, holographic films or preprinted stock.

Claim 21 (New): A pull apart device according to claim 19, wherein a single continous polystyrene substrate is folded over onto itself before or after laminating to another substrate such as a paper of film.

Claim 22 (New): A pull apart device according to claim 16, wherein the microcapsules contain a fragrance which is released upon separation of the overlying plies.

Claim 23 (New): A pull apart device comprising:

a first ply having an inside surface comprising paper,

a second ply having an inside surface comprising polystyrene, a polystyrene blend or a polystyrene coated substrate; and

a microcapsule layer comprising microcapsules which are made with a semi permeable wall material deposited by conventional means onto an inside surface of either the top or bottom portion, wherein the microcapsules adhere to the bottom and top surfaces such that the capsule coating bonds the overlying surfaces together, the bond between the top and bottom surfaces can be broken by separating the plies, whereby the microcapsules are substantially compromised and release a material contained therein.

Claim 24 (New): A pull apart device comprising:

a top portion having an inside surface comprising polystyrene, a polystyrene blend or a polystyrene coated substrate,

a bottom portion having an inside surface comprising polystyrene, a polystyrene blend or a polystyrene coated substrate; and

a microcapsule layer comprising microcapsules made with a semi permeable wall material deposited by conventional means onto an inside surface of either the top or bottom portion, wherein the microcapsules adhere to the bottom and top surfaces such that the capsule coating bonds the overlying surfaces together, the bond between the top and bottom surfaces can be broken by separating the plies, whereby the microcapsules are substantially compromised and release a material contained therein.

Independent Claim # 23 is a redraft of claim # 8 utilizing the examiners suggestions. Claim 23 encompasses a paper to polystyrene construction. This embodiment potentially further reduces the cost associated with manufacturing the invention while taking advantage of the microcapsule adhesion to the polystyrene film as disclosed in the application.

Independent Claim # 24 is a redraft of Claim # 15(New). This embodiment seeks to encompass other microencapsulation methods which yield microcapsules of similar permeability to the claimed gelatin based microcapsules. As discussed in my original application, the most widely used microencapsulation methods are complex coacervation systems, these include gelatin and a polyanion such as Gum Arabic, polyphosphate, alginate, and carboxymethylcellulose. All of these methods yield microcapsules with varying degrees of permeability. Simple coacervation systems including simple coacervation of gelatin, cellulose acetate phthalate, Chitosan, soy glycinin and many other potential systems will also yield microcapsules with a relatively low crosslink density and a semi permeable microcapsule wall. United States Patent Number 4908233 describes a simple coaservation process. Still other encapsulation methods which do not need to include gelatin are various wax, fats and ethylcellulose systems. Although I have not fully evaluated each of these systems for suitability with the invention, it would be obvious to one skilled in the art which of these non gelatin based microencapsulation systems would yield the desirable degree of microcapsule wall permeability for the intended use.

Please let me know if these revised claims meet the requirements for allowance.

Claim rejections – 35 USC § 102 :

Charbonneau, US 4,988,557 – The styrene – butadiene Charbonneau refers to (column 2, line 57 and 63) is a commonly used ingredient in adhesives and coatings. Charbonneau discloses styrene – butadiene as one of the components of the paper coating, which increases the gloss and whiteness of the paper stock. The styrene – butadiene acts as a binder to hold the pigments together and promotes adhesion to the paper, it is not a polystyrene and it does not promote adhesion of the microcapsules to the paper (in fact the capsules will adhere with greater tenacity to the uncoated paper). In column 3, lines 50-53, Charbonneau is relying on the adhesive to bond his capsules to the substrate whereas my disclosure relies on the capsule wall alone as a bonding mechanism to the polystyrene substrate.

The disclosed invention functions in much the same way as Charbonneau's in that the microcapsules are ruptured as the overlying plies are separated. Charbonneau is primarily focused on a paper substrate and relies on an adhesive to bond the capsules to the substrate "so that upon separation of the two surfaces said bonded microcapsules are ruptured" (claim 1). Charbonneau does not disclose a polystyrene surface to which the microcapsules adhere, in general polystyrene would be a poor choice as a substrate because most fragrances would deform and even dissolve the polystyrene. The disclosed invention takes advantage of polystyrene's physical properties to enhance the

microcapsule wall while providing a means for microcapsule breakage without the need for adhesives which could and often do interfere with the fragrance fidelity.

Giannavola US 5,248,537 – The primary function of the styrene-acrylic coating in this invention (column 3, line 23) is as a vapor barrier to prevent the scent from prematurely escaping and contaminating the magazine. Giannavola discloses that an adhesive is necessary to construct the invention (in fact three adhesives are disclosed). Styrene-acrylic coatings provide barrier properties to contain the fragrance but do not promote adhesion of the microcapsules as does the use of polystyrene. It is surprising and unanticipated that polystyrene, which possesses poor barrier properties (it is a relatively poor water vapor and oxygen barrier and is very susceptible to attack by organic compounds commonly found in fragrance oils), would not only provide for adhesion of microcapsules without addition of adhesives but also would eliminate premature release or diffusion of fragrance.

Zolotarsky et al., US 6,723,671 – The polystyrene layer described in Zolotarsky (column 6, line 14) functions as a support for the article and does not actively come in contact with the polystyrene. Zolotarsky does not suggest depositing the microcapsules on polystyrene.

Paciorek et al., US 3,685,734 - Paciorek is suggesting utilizing styrene (column 2, line 51), which is an oily liquid, as plasticizer for vinyl chloride resins. Polystyrene is a polymer made from the liquid monomer styrene. Paciorek does not suggest utilizing polystyrene as a cover sheet because polystyrene does not inherently possess the required barrier properties.

Greenland US 5,782,060 – Greenland's "inner polymeric thermoplastic sealant layer" (column 3, lines 8-9 and 15) is the coating applied to a substrate in order achieve a heat seal. A polystyrene coating in this application would be dissolved by any fragrance contained in the sampler and destroy the utility of the sampler. Column 3, lines 29-34 specify "polyethylene, polypropylene, EVA or blends or co-polymers thereof" as suitable sealant compositions. Please note that Greenland does not suggest utilizing polystyrene as a substrate that would come in contact with the fragrance.

Vernardakis et al., US 6,454,842 – The styrene maleic anhydride is intended as a microencapsulation aid and does not provide a substrate for the microcapsules.

Tsaur et al., US 5,246,603 – Tsaur does not include polystyrene as a suitable substrate.

I hope I have responded to all of your questions, please let me know if you need any additional information.

Sincerely,

Christopher Tararuj